



PURCHASED

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The five hundred and ninety-third meeting of the Club was held jointly with the B.O.U. on Tuesday, 21st November, 1961.

**Editor of the Bulletin**

Would contributors kindly note the address of Mr. John Yealland on the back of the Bulletin, as he has now taken over the Editorship.

**An ovarian tumour in a Mallard**

by J. V. BEER AND G. W. STOREY

*Received 27th April, 1961*

During the winter 1958/59, a female Mallard, *Anas platyrhynchos platyrhynchos* Linnaeus, showing marked abdominal distension was observed amongst the collection at the Wildfowl Trust. For some months it was kept under observation but although having great difficulty with flight it was sufficiently agile to avoid capture and in spite of obvious deformity it appeared to pursue a normal existence. The bird was found dead on 24th February 1959 when it was possible to subject it to examination.

It was fortunate that the duck was carrying a ring from which it was discovered that it was ringed as a full-grown bird on 30th January 1956 thus establishing that it was at least  $3\frac{1}{2}$  years old.

*Pathological Examination*

External examination revealed that it was in fair condition with normal plumage and weighed 1390 grms. There was an obvious abdominal mass.

At post-mortem it was observed that the body showed depletion of sub-cutaneous and visceral fat whilst the blood vessels were distended and prominent.

The heart, which was soft and pale, showed no gross abnormality, while the lungs exhibited congestion. The liver was friable and showed small yellow deposits. There was enlargement of one of the parathyroid glands, which was of a dark brown colour. Small quantities of a serous fluid were present in the body cavities.

The most significant finding was a large tumour arising from the ovary. The tumour, which was non-capsulated and ovoid in shape, measured approximately 12 x 7 cms. and was attached to the ovarian area by a highly



Fig. 1 Ovarian tumour from a Mallard, which has been cut longitudinally, showing the pedicle and the internal structure.

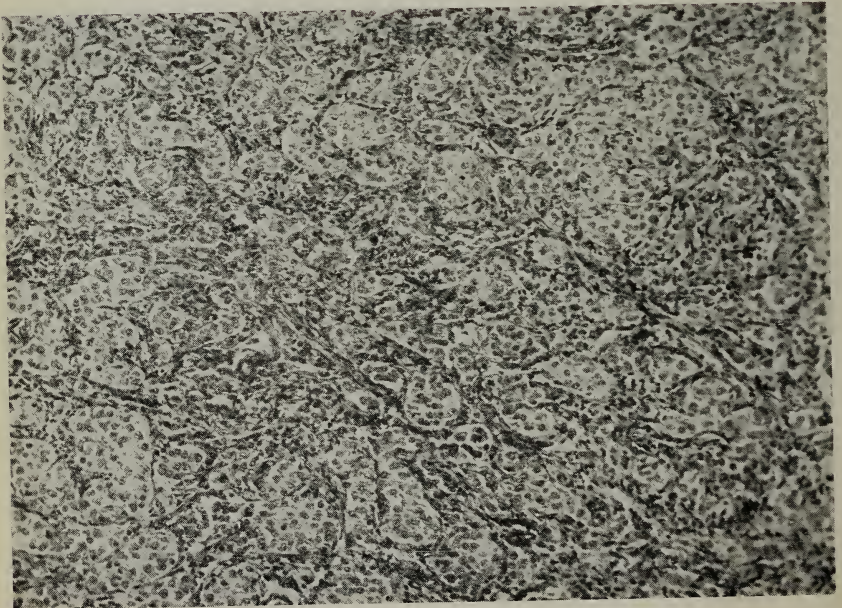


Fig. 2 The cellular structure of the tumour (x 250)

vascular pedicle (Fig. 1). The tumour was white in colour, firm and rubbery in texture, and weighed 400 grms.

There were numerous metastatic nodules up to a few millimetres in size on the peritoneal membrane.

### *Histology*

Sections of the tumour showed it to be a granulosa-cell tumour with characteristic variations in structure. For the most part it consists of (Fig. 2) groups of pale staining rounded or polyhedral cells with a well defined nucleus. There is a well defined fibrous stroma carrying thin-walled blood vessels. In parts, the fibrous trabeculae are more pronounced, whilst elsewhere the cell proliferation is such that one sees large sheets of cells with only scanty interstitial tissue. Occasionally, there is a tendency to papillary formation and also luteinisation, not uncommon findings in such tumours. Degenerative changes are absent and there is little cell atypism. The characteristic "rosette" formation which occurs in this type of tumour was not a feature of this particular specimen.

### *Discussion*

Ovarian tumours in birds are described by Willis (1948) who states that their examination in the literature has been both sporadic and superficial.

Feldman & Olson (1959) in their review of "Neoplastic Diseases of the Chicken" report that various workers had found an incidence of tumours of from 2 to 27 per cent and, in particular, that Eber & Malke (1932) had found 15 cases of ovarian tumour in a series of 239 (6.4 per cent). The reviewers consider that Seifried (1923) had described a granulosa tumour in the chicken.

The incidence of tumours in captive wild birds would seem to be lower. Lombard & Witte (1959) in 10,240 autopsies carried out at the Philadelphia Zoological Gardens reported the finding of 139 cases—an incidence of 1.4 per cent. In this series, in which there were 1081 autopsies on the Anseriformes, only three cases showed carcinomas of the genital tract, one of these being an ovarian carcinoma in a Bahama Pintail, *Anas bahamensis* Linnaeus. Jennings (1959b) reported a series of 680 autopsies on the Anatidae in which he found four cases of tumour and cyst (0.6 per cent) but no ovarian tumour.

In free-living wild birds the incidence of tumours is similarly low. In a series of 734 post-mortems, Jennings (1954, 1955 and 1959a) and Jennings & Soulsby (1956 and 1957) reported four cases of tumour and one case of an ovarian cyst in a Black-headed Gull, *Larus ridibundus* Linnaeus (0.7 per cent), while McDiarmid (1956) and Keymer (1958) only reported two cases, neither of which involved the ovary. From the literature the ovarian tumour would appear to be uncommon.

The low incidence of tumours in wild birds may be due, in part at least, to the relative short life-span of the birds (McDiarmid 1956). Lombard & Witte (1959) noted that an increase of incidence of the disease in captive wild birds paralleled the increased exhibition period which had resulted from improved feeding. The picture is further complicated in the case of free-living wild birds by a relative lack of fresh material, when the frequency of diagnosis would be expected to be lower than in captive birds.

The authors have not discovered any reference to a tumour of the type

described occurring in the Anatidae. The tumour is a typical ovarian carcinoma of the granulosa-cell type which showed extensive peritoneal metastasis. A healthy duck of this species and age would weigh approximately 1100 grms. based on its linear measurements (Beer, unpublished data), thus indicating a significant degree of malignant cachexia which undoubtedly resulted in death.

### Summary

A malignant ovarian tumour of granulosa-cell type is reported occurring in an adult female Mallard. Comparison is made with the occurrence of tumours in the chicken and in other birds both captive and wild.

### Acknowledgements:

The authors wish to thank Professor R. A. Willis for confirmation of the histological diagnosis.

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## Further breeding records from Northern Rhodesia (No. 2)

by C. W. BENSON AND CAPTAIN CHARLES R. S. PITMAN

*Received 1st May, 1961*

### INTRODUCTION

The present paper is a corollary to that by Benson and Pitman (1958-59). As previously, data are only included for those species for which they are scanty or lacking in Benson and White's Check List (1957). Eggs recorded as collected are in the British Museum, unless otherwise indicated, while any parents or young birds so recorded are in the National Museum, Bulawayo. Co-ordinates are given for any locality, the position of which is not indicated in the Check List. The nomenclature of that work is followed. We are most grateful to the various persons whose names are mentioned below, in the appropriate context, for information and/or specimens.